

WHAT IS CLAIMED IS:

1. A system comprising:
 - a first register;
 - 5 a second register; and
 - a state machine connected to the first and second registers, the state machine:
 - determines a maximum number of channels that can be received by an interface connected to the system, and stores the
 - 10 maximum number in the first register,
 - determines a current number of different channels that are being sent to the interface, and stores the current number in the second register; and
 - detects a new channel message from a set top box
 - 15 connected to the interface, the new channel message indicating a new subscribed-to channel.
2. The system of claim 1 wherein, when the new channel message is detected, the state machine determines if the maximum
- 20 number is equal to the current number.
3. The system of claim 2 wherein the state machine further determines whether the set top box is currently receiving a previously subscribed-to channel.
- 25 4. The system of claim 3 wherein, when the maximum number is equal to the current number, and the set top box is currently receiving the previously subscribed-to channel, the state machine stops a transmission of the previously subscribed-to channel.

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5. The system of claim 4 wherein the state machine outputs the new subscribed-to channel after the previously subscribed-to channel has been stopped.
- 5 6. The system of claim 3 wherein the set top box is a member of a group.
7. The system of claim 6 wherein, when the maximum number is not equal to the current number, the state machine outputs a group specific query to the group.
- 10
8. The system of claim 7 wherein the state machine outputs the new subscribed-to channel to the set top box after the group specific query has been output, but before a group specific query timer has expired.
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9. The system of claim 7 wherein the state machine outputs the new subscribed-to channel to the set top box after the group specific query has been output, and after a group specific query timer has expired.
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10. The system of claim 3 wherein, when the maximum number is equal to the current number, and the set top box is not currently receiving a subscribed-to channel, the state machine drops the new channel message.
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11. A method of operating a system connected to an interface, the system including a first register and a second register, the method comprising the steps of:

determining a maximum number of channels that can be received
by the interface, and storing the maximum number in the first register;
determining a current number of different channels that are being
sent to the interface, and storing the current number in the second
5 register; and
detecting a new channel message from a set top box connected
to the interface, the new channel message indicating a new subscribed-
to channel.

10 12. The method of claim 11 and further comprising the step
of, when the new channel message is detected, determining if the
maximum number is equal to the current number.

15 13. The method of claim 12 and further comprising the step of
determining whether the set top box is currently receiving a previously
subscribed-to channel.

14. The method of claim 13 and further comprising the steps
of:
20 when the maximum number is equal to the current number, and
the set top box is currently receiving the previously subscribed-to
channel,
stopping a transmission of the previously subscribed-to channel;
and
25 outputting the new subscribed-to channel after the previously
subscribed-to channel has been stopped.

15. The method of claim 13 wherein the set top box is a
member of a group, and further comprising the step of, when the

maximum number is not equal to the current number, outputting a group specific query to the group.

16. The method of claim 15 and further comprising the step of
5 outputting the new subscribed-to channel after the group specific query has been output, but before a group specific query timer has expired.

17. The method of claim 15 and further comprising the step of
outputting the new subscribed-to channel after the group specific query
10 has been output, and after a group specific query timer has expired.

18. The method of claim 13 and further comprising the step
of, when the maximum number is equal to the current number, and the
set top box is not currently receiving a subscribed-to channel, dropping
15 the channel message.